

**Abstract:**

The present invention relates to electrical separators, especially for use in lithium high energy batteries, and to a process for making them.

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Separators for use in lithium high energy batteries have to have a very low weight and a very low thickness. It has been found that, surprisingly, such separators having a weight of less than 50 g/m<sup>2</sup> and a thickness of less than 35 µm are preparable by applying a ceramic coating to a polymeric

10 web less than 30 µm in thickness, these separators being very useful in lithium high energy batteries when pyrogenic oxides of the elements Al, Si and/or Zr are used as a particulate pore-forming component.